

## SEQUENCE LISTING

<110> FAGAN, Richard Joseph  
 DAVIDS, Andrew Robert  
 PHELPS, Christopher Benjamin  
 POWER, Christine  
 BOSCHERT, Ursula  
 CHVATCHKO, Yolande

<120> CYTOKINE ANTAGONIST MOLECULES

<130> C.R.116

<140> US 10/579,113

<141> 2006-05-11

<150> PCT/GB2004/004772

<151> 2004-11-12

<150> GB0326393.6

<151> 2003-11-12

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<213> Homo sapiens

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<213> Homo sapiens

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tcagcgacct gcagctggcc gatgagggca cctatgaggt cgagatctcc atcaccgacg 300
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35 40 45
Thr Val Val Gln Ser Ile Gly Thr Glu Val Ile Gly Thr Leu Arg Pro
50 55 60
Asp Tyr Arg Asp Arg Ile Arg Leu Phe Glu Asn Gly Ser Leu Leu Leu
65 70 75 80
Ser Asp Leu Gln Leu Ala Asp Glu Gly Thr Tyr Glu Val Glu Ile Ser
85 90 95
Ile Thr Asp Asp Thr Phe Thr Gly Glu Lys Thr Ile Asn Leu Thr Val
100 105 110
Asp Val

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atggcaagcc cctcctcaat gactcgagaa tgctcctgtc ccccgaccaa aagggtgctca 180
ccatcacccg cgtgctcatg gaggatgacg acctgtacag ctgcatgggtg gagaacccca 240
tcagccaggg ccgcagcctg cctgtcaaga tcaccgtata ca 282

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<212> PRT
<213> Homo sapiens

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Leu Ser Glu Ala Phe Thr Leu Asn Cys Ser His Glu Asn Gly Thr Lys  
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Pro Ser Tyr Thr Trp Leu Lys Asp Gly Lys Pro Leu Leu Asn Asp Ser  
           35                  40                  45

Arg Met Leu Leu Ser Pro Asp Gln Lys Val Leu Thr Ile Thr Arg Val  
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Leu Met Glu Asp Asp Asp Leu Tyr Ser Cys Met Val Glu Asn Pro Ile  
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Ser Gln Gly Arg Ser Leu Pro Val Lys Ile Thr Val Tyr Arg  
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 <212> PRT  
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Asn Asp Asp Arg Leu Lys Pro Glu Ala  
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 <213> Homo sapiens

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 tcgcccgcga gggccccgag ctgcgccggc cgctcgcgca gcgcctcgcg cacactgcgg 240  
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 <212> PRT  
 <213> Homo sapiens

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Thr Glu Pro Gly Pro Pro Gly Tyr Ser Val Ser Pro Ala Val Pro Gly  
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Arg Ser Pro Gly Leu Pro Ile Arg Ser Ala Arg Arg Tyr Pro Arg Ser  
                   35                  40                  45

Pro Ala Arg Ser Pro Ala Thr Gly Arg Thr His Ser Ser Pro Pro Arg  
                   50                  55                  60

Ala Pro Ser Ser Pro Gly Arg Ser Arg Ser Ala Ser Arg Thr Leu Arg  
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Thr Ala Gly Val His Ile Ile Arg Glu Gln Asp Glu Ala Gly Pro Val  
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Glu Ile Ser Ala  
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<210> 15  
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<212> DNA  
<213> Homo sapiens

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cgctgatcc atggcacctg ggggaagtgc gctctgcttt ctgtgcagta cagcagtacc 180  
agcagcgaca ggctgtagt gaagtggcag ctgaagcggg acaagccagt gaccgtggtg 240  
cagtccattg gcacagaggt catcggcacc ctgcggcctg actatcgaga cagtatccga 300  
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gaggtcgaga tctccatcac cgacgacacc ttcaactggg agaagacat caaccttact 420  
gtagatgtgc ccatttcgag gccacaggtg ttggtggctt caaccactgt gctggagctc 480  
agcgaggcct tcaccttgaa ctgctcacat gagaatggca ccaagcccag ctacacctgg 540  
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aaccocatca gccagggccg cagcctgcct gtcaagatca ccgtatacag aagaagctcc 720  
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<210> 16  
<211> 416  
<212> PRT  
<213> Homo sapiens

<400> 16  
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Gly Val Asn Ile Thr Ser Pro Val Arg Leu Ile His Gly Thr Val Gly  
35 40 45

Lys Ser Ala Leu Leu Ser Val Gln Tyr Ser Ser Thr Ser Ser Asp Arg  
50 55 60

Pro Val Val Lys Trp Gln Leu Lys Arg Asp Lys Pro Val Thr Val Val  
 65 70 75 80  
 Gln Ser Ile Gly Thr Glu Val Ile Gly Thr Leu Arg Pro Asp Tyr Arg  
 85 90 95  
 Asp Arg Ile Arg Leu Phe Glu Asn Gly Ser Leu Leu Leu Ser Asp Leu  
 100 105 110  
 Gln Leu Ala Asp Glu Gly Thr Tyr Glu Val Glu Ile Ser Ile Thr Asp  
 115 120 125  
 Asp Thr Phe Thr Gly Glu Lys Thr Ile Asn Leu Thr Val Asp Val Pro  
 130 135 140  
 Ile Ser Arg Pro Gln Val Leu Val Ala Ser Thr Thr Val Leu Glu Leu  
 145 150 155 160  
 Ser Glu Ala Phe Thr Leu Asn Cys Ser His Glu Asn Gly Thr Lys Pro  
 165 170 175  
 Ser Tyr Thr Trp Leu Lys Asp Gly Lys Pro Leu Leu Asn Asp Ser Arg  
 180 185 190  
 Met Leu Leu Ser Pro Asp Gln Lys Val Leu Thr Ile Thr Arg Val Leu  
 195 200 205  
 Met Glu Asp Asp Asp Leu Tyr Ser Cys Met Val Glu Asn Pro Ile Ser  
 210 215 220  
 Gln Gly Arg Ser Leu Pro Val Lys Ile Thr Val Tyr Arg Arg Ser Ser  
 225 230 235 240  
 Leu Tyr Ile Ile Leu Ser Thr Gly Gly Ile Phe Leu Leu Val Thr Leu  
 245 250 255  
 Val Thr Val Cys Ala Cys Trp Lys Pro Ser Lys Arg Lys Gln Lys Lys  
 260 265 270  
 Leu Glu Lys Gln Asn Ser Leu Glu Tyr Met Asp Gln Asn Asp Asp Arg  
 275 280 285  
 Leu Lys Pro Glu Ala Asp Thr Leu Pro Arg Ser Gly Glu Gln Glu Arg  
 290 295 300  
 Lys Asn Pro Met Ala Leu Tyr Ile Leu Lys Asp Lys Asp Ser Pro Glu  
 305 310 315 320  
 Thr Glu Glu Asn Pro Ala Pro Glu Pro Arg Ser Ala Thr Glu Pro Gly  
 325 330 335  
 Pro Pro Gly Tyr Ser Val Ser Pro Ala Val Pro Gly Arg Ser Pro Gly  
 340 345 350  
 Leu Pro Ile Arg Ser Ala Arg Arg Tyr Pro Arg Ser Pro Ala Arg Ser

355                                      360                                      365  
 Pro Ala Thr Gly Arg Thr His Ser Ser Pro Pro Arg Ala Pro Ser Ser  
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 Pro Gly Arg Ser Arg Ser Ala Ser Arg Thr Leu Arg Thr Ala Gly Val  
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 <211> 1257  
 <212> DNA  
 <213> Mus musculus

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 cgtctgatcc acggcacagt ggggaagtgc gccctgcttt ccgtgcagta cagtagcacc 180  
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 aaccccatca gccaggctcg cagcctgcct gtcaagatca ctgtgtatag aagaagctcc 720  
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 agtgagaaac aggagcggaa gaacccaatg gcactctata tcctgaagga taaggattcc 960  
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<210> 18  
 <211> 418  
 <212> PRT  
 <213> Mus musculus

<400> 18  
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                                     20                                      25                                      30  
 Gly Val Asn Ile Thr Ser Pro Val Arg Leu Ile His Gly Thr Val Gly  
                                     35                                      40                                      45

Lys Ser Ala Leu Leu Ser Val Gln Tyr Ser Ser Thr Ser Ser Asp Lys  
 50 55 60  
 Pro Val Val Lys Trp Gln Leu Lys Arg Asp Lys Pro Val Thr Val Val  
 65 70 75 80  
 Gln Ser Ile Gly Thr Glu Val Ile Gly Thr Leu Arg Pro Asp Tyr Arg  
 85 90 95  
 Asp Arg Ile Arg Leu Phe Glu Asn Gly Ser Leu Leu Leu Ser Asp Leu  
 100 105 110  
 Gln Leu Ala Asp Glu Gly Thr Tyr Glu Val Glu Ile Ser Ile Thr Asp  
 115 120 125  
 Asp Thr Phe Thr Gly Glu Lys Thr Ile Asn Leu Thr Val Asp Val Pro  
 130 135 140  
 Ile Ser Arg Pro Gln Val Leu Val Ala Ser Thr Thr Val Leu Glu Leu  
 145 150 155 160  
 Ser Glu Ala Phe Thr Leu Asn Cys Ser His Glu Asn Gly Thr Lys Pro  
 165 170 175  
 Ser Tyr Thr Trp Leu Lys Asp Gly Lys Pro Leu Leu Asn Asp Ser Arg  
 180 185 190  
 Met Leu Leu Ser Pro Asp Gln Lys Val Leu Thr Ile Thr Arg Val Leu  
 195 200 205  
 Met Glu Asp Asp Asp Leu Tyr Ser Cys Val Val Glu Asn Pro Ile Ser  
 210 215 220  
 Gln Val Arg Ser Leu Pro Val Lys Ile Thr Val Tyr Arg Arg Ser Ser  
 225 230 235 240  
 Leu Tyr Ile Ile Leu Ser Thr Gly Gly Ile Phe Leu Leu Val Thr Leu  
 245 250 255  
 Val Thr Val Cys Ala Cys Trp Lys Pro Ser Lys Lys Ser Arg Lys Lys  
 260 265 270  
 Arg Lys Leu Glu Lys Gln Asn Ser Leu Glu Tyr Met Asp Gln Asn Asp  
 275 280 285  
 Asp Arg Leu Lys Ser Glu Ala Asp Thr Leu Pro Arg Ser Gly Glu Gln  
 290 295 300  
 Glu Arg Lys Asn Pro Met Ala Leu Tyr Ile Leu Lys Asp Lys Asp Ser  
 305 310 315 320  
 Ser Glu Pro Asp Glu Asn Pro Ala Thr Glu Pro Arg Ser Thr Thr Glu  
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 Pro Gly Pro Pro Gly Tyr Ser Val Ser Pro Pro Val Pro Gly Arg Ser



Ser Ala

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ctctttgaaa	atggctccct	gcttctcagc	gacctgcagc	tggccgatga	gggcacctat		360
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gtagatgtgc	ccattctogag	gccacaggtg	ttgggtggctt	caaccactgt	gctggagctc		480
agcgaggcct	tcaccttgaa	ctgctcacat	gagaatggca	ccaagcccag	ctacaccttg		540
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gtgtcacca	tcaccgcgt	gctcatggag	gatgacgacc	tgtacagctg	catggtggag		660
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Leu Ala Pro Phe Val Tyr Leu Leu Leu Ile Gln Thr Asp Pro Leu Glu
              20              25              30
Gly Val Asn Ile Thr Ser Pro Val Arg Leu Ile His Gly Thr Val Gly
              35              40              45
Lys Ser Ala Leu Leu Ser Val Gln Tyr Ser Ser Thr Ser Ser Asp Arg
              50              55              60
Pro Val Val Lys Trp Gln Leu Lys Arg Asp Lys Pro Val Thr Val Val

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65		70		75		80
Gln Ser Ile Gly Thr Glu Val Ile Gly Thr Leu Arg Pro Asp Tyr Arg						
	85			90		95
Asp Arg Ile Arg Leu Phe Glu Asn Gly Ser Leu Leu Leu Ser Asp Leu						
	100			105		110
Gln Leu Ala Asp Glu Gly Thr Tyr Glu Val Glu Ile Ser Ile Thr Asp						
	115			120		125
Asp Thr Phe Thr Gly Glu Lys Thr Ile Asn Leu Thr Val Asp Val Pro						
	130			135		140
Ile Ser Arg Pro Gln Val Leu Val Ala Ser Thr Thr Val Leu Glu Leu						
	145			150		155
Ser Glu Ala Phe Thr Leu Asn Cys Ser His Glu Asn Gly Thr Lys Pro						
	165			170		175
Ser Tyr Thr Trp Leu Lys Asp Gly Lys Pro Leu Leu Asn Asp Ser Arg						
	180			185		190
Met Leu Leu Ser Pro Asp Gln Lys Val Leu Thr Ile Thr Arg Val Leu						
	195			200		205
Met Glu Asp Asp Asp Leu Tyr Ser Cys Met Val Glu Asn Pro Ile Ser						
	210			215		220
Gln Gly Arg Ser Leu Pro Val Lys Ile Thr Val Tyr Arg Arg Ser Ser						
	225			230		235
						240

<210> 21  
 <211> 621  
 <212> DNA  
 <213> Homo sapiens

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 gacaagccag tgaccgtggg gcagtcatt ggcacagagg tcatcggcac cctgcggcct 180  
 gactatcgag accgtatccg actctttgaa aatggctccc tgcttctcag cgacctgcag 240  
 ctggccgatg agggcaccta tgaggtegag atctccatca ccgacgacac cttoactggg 300  
 gagaagacca tcaaccttac tgtagatgtg ccattttcga ggccacaggt gttgggtggct 360  
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<210> 22  
 <211> 207  
 <212> PRT  
 <213> Homo sapiens

&lt;400&gt; 22

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20 25 30

Val Val Lys Trp Gln Leu Lys Arg Asp Lys Pro Val Thr Val Val Gln  
35 40 45

Ser Ile Gly Thr Glu Val Ile Gly Thr Leu Arg Pro Asp Tyr Arg Asp  
50 55 60

Arg Ile Arg Leu Phe Glu Asn Gly Ser Leu Leu Leu Ser Asp Leu Gln  
65 70 75 80

Leu Ala Asp Glu Gly Thr Tyr Glu Val Glu Ile Ser Ile Thr Asp Asp  
85 90 95

Thr Phe Thr Gly Glu Lys Thr Ile Asn Leu Thr Val Asp Val Pro Ile  
100 105 110

Ser Arg Pro Gln Val Leu Val Ala Ser Thr Thr Val Leu Glu Leu Ser  
115 120 125

Glu Ala Phe Thr Leu Asn Cys Ser His Glu Asn Gly Thr Lys Pro Ser  
130 135 140

Tyr Thr Trp Leu Lys Asp Gly Lys Pro Leu Leu Asn Asp Ser Arg Met  
145 150 155 160

Leu Leu Ser Pro Asp Gln Lys Val Leu Thr Ile Thr Arg Val Leu Met  
165 170 175

Glu Asp Asp Asp Leu Tyr Ser Cys Met Val Glu Asn Pro Ile Ser Gln  
180 185 190

Gly Arg Ser Leu Pro Val Lys Ile Thr Val Tyr Arg Arg Ser Ser  
195 200 205

&lt;210&gt; 23

&lt;211&gt; 328

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 23

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gacaagccag tgaccgtggt gcagtcattt ggcacagagg tcatcggcac cctgcggcct 180  
gactatcgag accgtatccg actctttgaa aatggctccc tgcttctcag cgacctgcag 240  
ctggccgatg agggcaccta tgaggtcgag atctccatca ccgacgacac cttcactggg 300  
gagaagacca tcaaccttac tgtagatg 328

&lt;210&gt; 24

<211> 110  
 <212> PRT  
 <213> Homo sapiens

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 20 25 30  
 Val Val Lys Trp Gln Leu Lys Arg Asp Lys Pro Val Thr Val Val Gln  
 35 40 45  
 Ser Ile Gly Thr Glu Val Ile Gly Thr Leu Arg Pro Asp Tyr Arg Asp  
 50 55 60  
 Arg Ile Arg Leu Phe Glu Asn Gly Ser Leu Leu Leu Ser Asp Leu Gln  
 65 70 75 80  
 Leu Ala Asp Glu Gly Thr Tyr Glu Val Glu Ile Ser Ile Thr Asp Asp  
 85 90 95  
 Thr Phe Thr Gly Glu Lys Thr Ile Asn Leu Thr Val Asp Val  
 100 105 110

<210> 25  
 <211> 1152  
 <212> DNA  
 <213> Homo sapiens

<400> 25  
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 tctgtgcagt acagcagtag cagcagcgac aggcctgtag tgaagtggca gctgaagcgg 120  
 gacaagccag tgaccgtggt gcagtcattt ggacagagg tcatcgccac cctgcggcct 180  
 gactatcgag acogtatccg actctttgaa aatggctccc tgcttctcag cgacctgcag 240  
 ctggccgatg agggcaccta tgaggtcgag atctccatca ccgacgacac cttcactggg 300  
 gagaagacca tcaaccttac tgtagatgtg cccatttcga ggccacaggt gttgggtggc 360  
 tcaaccactg tgctggagct cagcgaggcc ttacacctga actgctcaca tgagaatggc 420  
 accaagccca gctacacctg gctgaaggat ggcaagcccc tctcaatga ctcgagaatg 480  
 ctccgtgtcc cggaccaaaa ggtgctcacc atcaccgcgg tgctcatgga ggatgacgac 540  
 ctgtacagct gcatgggtgga gaaccccatc agccagggcc gcagcctgcc tgtcaagatc 600  
 accgtataca gaagaagctc cttttacatc atcttgtcta caggaggcat cttcctcctt 660  
 gtgaccttgg tgacagtctg tgccctgctg aaacctcca aaaggaaaca gaagaagcta 720  
 gaaaagcaaa actccctgga atacatggat cagaatgatg accgcctgaa accagaagca 780  
 gacacctcc ctcgaagtgg tgagcaggaa cggaagaacc ccatggcact ctatatcctg 840  
 aaggacaagg actccccgga gaccgaggag aacccggccc cggagcctcg aagcgcgacg 900  
 gagcccgccc cgcccgcta ctccgtgtct cccgcctgct cgggcccgtc gccggggctg 960  
 cccatccgct ctgcccggcg ctacccgcgc tccccagcgc gctccccagc caccggccgg 1020  
 acacactcgt cgccgcccag ggccccgagc tcgcccggcc gctcgcgag cgctcgcgc 1080  
 aactgcgga ctgcgggcgt gcacataatc cgcgagcaag acgaggccgg cccggtggag 1140  
 atcagcgccct ga 1152

<210> 26  
 <211> 383

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<212>   PRT
<213>   Homo sapiens

<400>   26
Val Asn Ile Thr Ser Pro Val Arg Leu Ile His Gly Thr Val Gly Lys
1      5      10      15

Ser Ala Leu Leu Ser Val Gln Tyr Ser Ser Thr Ser Ser Asp Arg Pro
      20      25      30

Val Val Lys Trp Gln Leu Lys Arg Asp Lys Pro Val Thr Val Val Gln
      35      40      45

Ser Ile Gly Thr Glu Val Ile Gly Thr Leu Arg Pro Asp Tyr Arg Asp
      50      55      60

Arg Ile Arg Leu Phe Glu Asn Gly Ser Leu Leu Leu Ser Asp Leu Gln
      65      70      75      80

Leu Ala Asp Glu Gly Thr Tyr Glu Val Glu Ile Ser Ile Thr Asp Asp
      85      90      95

Thr Phe Thr Gly Glu Lys Thr Ile Asn Leu Thr Val Asp Val Pro Ile
      100      105      110

Ser Arg Pro Gln Val Leu Val Ala Ser Thr Thr Val Leu Glu Leu Ser
      115      120      125

Glu Ala Phe Thr Leu Asn Cys Ser His Glu Asn Gly Thr Lys Pro Ser
      130      135      140

Tyr Thr Trp Leu Lys Asp Gly Lys Pro Leu Leu Asn Asp Ser Arg Met
      145      150      155      160

Leu Leu Ser Pro Asp Gln Lys Val Leu Thr Ile Thr Arg Val Leu Met
      165      170      175

Glu Asp Asp Asp Leu Tyr Ser Cys Met Val Glu Asn Pro Ile Ser Gln
      180      185      190

Gly Arg Ser Leu Pro Val Lys Ile Thr Val Tyr Arg Arg Ser Ser Leu
      195      200      205

Tyr Ile Ile Leu Ser Thr Gly Gly Ile Phe Leu Leu Val Thr Leu Val
      210      215      220

Thr Val Cys Ala Cys Trp Lys Pro Ser Lys Arg Lys Gln Lys Lys Leu
      225      230      235      240

Glu Lys Gln Asn Ser Leu Glu Tyr Met Asp Gln Asn Asp Asp Arg Leu
      245      250      255

Lys Pro Glu Ala Asp Thr Leu Pro Arg Ser Gly Glu Gln Glu Arg Lys
      260      265      270

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Asn Pro Met Ala Leu Tyr Ile Leu Lys Asp Lys Asp Ser Pro Glu Thr  
 275 280 285  
 Glu Glu Asn Pro Ala Pro Glu Pro Arg Ser Ala Thr Glu Pro Gly Pro  
 290 295 300  
 Pro Gly Tyr Ser Val Ser Pro Ala Val Pro Gly Arg Ser Pro Gly Leu  
 305 310 315 320  
 Pro Ile Arg Ser Ala Arg Arg Tyr Pro Arg Ser Pro Ala Arg Ser Pro  
 325 330 335  
 Ala Thr Gly Arg Thr His Ser Ser Pro Pro Arg Ala Pro Ser Ser Pro  
 340 345 350  
 Gly Arg Ser Arg Ser Ala Ser Arg Thr Leu Arg Thr Ala Gly Val His  
 355 360 365  
 Ile Ile Arg Glu Gln Asp Glu Ala Gly Pro Val Glu Ile Ser Ala  
 370 375 380  
 <210> 27  
 <211> 256  
 <212> PRT  
 <213> Homo sapiens  
 <400> 27  
 Met Lys Arg Glu Arg Gly Ala Leu Ser Arg Ala Ser Arg Ala Leu Arg  
 1 5 10 15  
 Leu Ala Pro Phe Val Tyr Leu Leu Leu Ile Gln Thr Asp Pro Leu Glu  
 20 25 30  
 Gly Val Asn Ile Thr Ser Pro Val Arg Leu Ile His Gly Thr Val Gly  
 35 40 45  
 Lys Ser Ala Leu Leu Ser Val Gln Tyr Ser Ser Thr Ser Ser Asp Arg  
 50 55 60  
 Pro Val Val Lys Trp Gln Leu Lys Arg Asp Lys Pro Val Thr Val Val  
 65 70 75 80  
 Gln Ser Ile Gly Thr Glu Val Ile Gly Thr Leu Arg Pro Asp Tyr Arg  
 85 90 95  
 Asp Arg Ile Arg Leu Phe Glu Asn Gly Ser Leu Leu Leu Ser Asp Leu  
 100 105 110  
 Gln Leu Ala Asp Glu Gly Thr Tyr Glu Val Glu Ile Ser Ile Thr Asp  
 115 120 125  
 Asp Thr Phe Thr Gly Glu Lys Thr Ile Asn Leu Thr Val Asp Val Pro  
 130 135 140  
 Ile Ser Arg Pro Gln Val Leu Val Ala Ser Thr Thr Val Leu Glu Leu

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145              150              155              160
Ser Glu Ala Phe Thr Leu Asn Cys Ser His Glu Asn Gly Thr Lys Pro
              165              170              175
Ser Tyr Thr Trp Leu Lys Asp Gly Lys Pro Leu Leu Asn Asp Ser Arg
              180              185              190
Met Leu Leu Ser Pro Asp Gln Lys Val Leu Thr Ile Thr Arg Val Leu
              195              200              205
Met Glu Asp Asp Asp Leu Asp Ser Cys Val Val Glu Asn Pro Ile Asn
              210              215              220
Gln Gly Arg Thr Leu Pro Cys Lys Ile Thr Val Tyr Lys Lys Ser Ser
225              230              235              240
Leu Ser Ser Ile Trp Leu Gln Glu Ala Phe Ser Ser Leu Gly Pro Trp
              245              250              255

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<210> 28
<211> 256
<212> PRT
<213> Homo sapiens

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<400> 28
Met Lys Arg Glu Arg Gly Ala Leu Ser Arg Ala Ser Arg Ala Leu Arg
1              5              10              15
Leu Ala Pro Phe Val Tyr Leu Leu Leu Ile Gln Thr Asp Pro Leu Glu
              20              25              30
Gly Val Asn Ile Thr Ser Pro Val Arg Leu Ile His Gly Thr Val Gly
              35              40              45
Lys Ser Ala Leu Leu Ser Val Gln Tyr Ser Ser Thr Ser Ser Asp Arg
50              55              60
Pro Val Val Lys Trp Gln Leu Lys Arg Asp Lys Pro Val Thr Val Val
65              70              75              80
Gln Ser Ile Gly Thr Glu Val Ile Gly Thr Leu Arg Pro Asp Tyr Arg
              85              90              95
Asp Arg Ile Arg Leu Phe Glu Asn Gly Ser Leu Leu Leu Ser Asp Leu
              100              105              110
Gln Leu Ala Asp Glu Gly Thr Tyr Glu Val Glu Ile Ser Ile Thr Asp
115              120              125
Asp Thr Phe Thr Gly Glu Lys Thr Ile Asn Leu Thr Val Asp Val Pro
130              135              140
Ile Ser Arg Pro Gln Val Leu Val Ala Ser Thr Thr Val Leu Glu Leu

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145              150              155              160
Ser Glu Ala Phe Thr Leu Asn Cys Ser His Glu Asn Gly Thr Lys Pro
      165              170              175
Ser Tyr Thr Trp Leu Lys Asp Gly Lys Pro Leu Leu Asn Asp Ser Arg
      180              185              190
Met Leu Leu Ser Pro Asp Gln Lys Val Leu Thr Ile Thr Arg Val Leu
      195              200              205
Met Glu Asp Asp Asp Leu Asp Ser Cys Val Val Glu Asn Pro Ile Asn
      210              215              220
Gln Gly Arg Thr Leu Pro Cys Lys Ile Thr Val Tyr Lys Lys Ser Ser
225              230              235              240
Phe Tyr Ile Ile Cys Leu Lys Glu Ala Ser Ser Ser Phe Gly Pro Trp
      245              250              255

<210> 29
<211> 213
<212> PRT
<213> Homo sapiens

<400> 29
Val Asn Ile Thr Ser Pro Val Arg Leu Ile His Gly Thr Val Gly Lys
1              5              10              15
Ser Ala Leu Leu Ser Val Gln Tyr Ser Ser Thr Ser Ser Asp Arg Pro
      20              25              30
Val Val Lys Trp Gln Leu Lys Arg Asp Lys Pro Val Thr Val Val Gln
      35              40              45
Ser Ile Gly Thr Glu Val Ile Gly Thr Leu Arg Pro Asp Tyr Arg Asp
      50              55              60
Arg Ile Arg Leu Phe Glu Asn Gly Ser Leu Leu Leu Ser Asp Leu Gln
65              70              75              80
Leu Ala Asp Glu Gly Thr Tyr Glu Val Glu Ile Ser Ile Thr Asp Asp
      85              90              95
Thr Phe Thr Gly Glu Lys Thr Ile Asn Leu Thr Val Asp Val Pro Ile
      100              105              110
Ser Arg Pro Gln Val Leu Val Ala Ser Thr Thr Val Leu Glu Leu Ser
      115              120              125
Glu Ala Phe Thr Leu Asn Cys Ser His Glu Asn Gly Thr Lys Pro Ser
      130              135              140
Tyr Thr Trp Leu Lys Asp Gly Lys Pro Leu Leu Asn Asp Ser Arg Met

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145              150              155              160
Leu Leu Ser Pro Asp Gln Lys Val Leu Thr Ile Thr Arg Val Leu Met
              165              170              175

Glu Asp Asp Asp Leu Tyr Ser Cys Met Val Glu Asn Pro Ile Ser Gln
              180              185              190

Gly Arg Ser Leu Pro Val Lys Ile Thr Val Tyr Arg Arg Ser Ser His
              195              200              205

His His His His His
              210

<210> 30
<211> 439
<212> PRT
<213> Homo sapiens

<400> 30
Val Asn Ile Thr Ser Pro Val Arg Leu Ile His Gly Thr Val Gly Lys
1              5              10              15

Ser Ala Leu Leu Ser Val Gln Tyr Ser Ser Thr Ser Ser Asp Arg Pro
              20              25              30

Val Val Lys Trp Gln Leu Lys Arg Asp Lys Pro Val Thr Val Val Gln
              35              40              45

Ser Ile Gly Thr Glu Val Ile Gly Thr Leu Arg Pro Asp Tyr Arg Asp
              50              55              60

Arg Ile Arg Leu Phe Glu Asn Gly Ser Leu Leu Leu Ser Asp Leu Gln
65              70              75              80

Leu Ala Asp Glu Gly Thr Tyr Glu Val Glu Ile Ser Ile Thr Asp Asp
              85              90              95

Thr Phe Thr Gly Glu Lys Thr Ile Asn Leu Thr Val Asp Val Pro Ile
              100              105              110

Ser Arg Pro Gln Val Leu Val Ala Ser Thr Thr Val Leu Glu Leu Ser
              115              120              125

Glu Ala Phe Thr Leu Asn Cys Ser His Glu Asn Gly Thr Lys Pro Ser
              130              135              140

Tyr Thr Trp Leu Lys Asp Gly Lys Pro Leu Leu Asn Asp Ser Arg Met
145              150              155              160

Leu Leu Ser Pro Asp Gln Lys Val Leu Thr Ile Thr Arg Val Leu Met
              165              170              175

Glu Asp Asp Asp Leu Tyr Ser Cys Met Val Glu Asn Pro Ile Ser Gln
              180              185              190

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Gly Arg Ser Leu Pro Val Lys Ile Thr Val Tyr Arg Arg Ser Ser Glu  
           195                          200                          205  
 Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro  
       210                          215                          220  
 Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys  
 225                          230                          235                          240  
 Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val  
                           245                          250                          255  
 Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp  
                           260                          265                          270  
 Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr  
           275                          280                          285  
 Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp  
       290                          295                          300  
 Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu  
 305                          310                          315                          320  
 Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg  
                           325                          330                          335  
 Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys  
           340                          345                          350  
 Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp  
           355                          360                          365  
 Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys  
       370                          375                          380  
 Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser  
 385                          390                          395                          400  
 Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser  
                           405                          410                          415  
 Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser  
           420                          425                          430  
 Leu Ser Leu Ser Pro Gly Lys  
       435  
 <210> 31  
 <211> 186  
 <212> PRT  
 <213> Homo sapiens  
 <400> 31

Val Arg Leu Ile His Gly Thr Val Gly Lys Ser Ala Leu Leu Ser Val  
 1 5 10 15  
 Gln Tyr Ser Ser Thr Ser Ser Asp Arg Pro Val Val Lys Trp Gln Leu  
 20 25 30  
 Lys Arg Asp Lys Pro Val Thr Val Val Gln Ser Ile Gly Thr Glu Val  
 35 40 45  
 Ile Gly Thr Leu Arg Pro Asp Tyr Arg Asp Arg Ile Arg Leu Phe Glu  
 50 55 60  
 Asn Gly Ser Leu Leu Leu Ser Asp Leu Gln Leu Ala Asp Glu Gly Thr  
 65 70 75 80  
 Tyr Glu Val Glu Ile Ser Ile Thr Asp Asp Thr Phe Thr Gly Glu Lys  
 85 90 95  
 Thr Ile Asn Leu Thr Val Asp Val Pro Ile Ser Arg Pro Gln Val Leu  
 100 105 110  
 Val Ala Ser Thr Thr Val Leu Glu Leu Ser Glu Ala Phe Thr Leu Asn  
 115 120 125  
 Cys Ser His Glu Asn Gly Thr Lys Pro Ser Tyr Thr Trp Leu Lys Asp  
 130 135 140  
 Gly Lys Pro Leu Leu Asn Asp Ser Arg Met Leu Leu Ser Pro Asp Gln  
 145 150 155 160  
 Lys Val Leu Thr Ile Thr Arg Val Leu Met Glu Asp Asp Asp Leu Tyr  
 165 170 175  
 Ser Cys Met Val Glu Asn Pro Ile Ser Gln  
 180 185

<210> 32  
 <211> 256  
 <212> PRT  
 <213> Homo sapiens

<400> 32

Met Lys Arg Glu Arg Gly Ala Leu Ser Arg Ala Ser Arg Ala Leu Arg  
 1 5 10 15  
 Leu Ala Pro Phe Val Tyr Leu Leu Leu Ile Gln Thr Asp Pro Leu Glu  
 20 25 30  
 Gly Val Asn Ile Thr Ser Pro Val Arg Leu Ile His Gly Thr Val Gly  
 35 40 45  
 Lys Ser Ala Leu Leu Ser Val Gln Tyr Ser Ser Thr Ser Ser Asp Arg  
 50 55 60

Pro Val Val Lys Trp Gln Leu Lys Arg Asp Lys Pro Val Thr Val Val  
 65 70 75 80  
 Gln Ser Ile Gly Thr Glu Val Ile Gly Thr Leu Arg Pro Asp Tyr Arg  
 85 90 95  
 Asp Arg Ile Arg Leu Phe Glu Asn Gly Ser Leu Leu Leu Ser Asp Leu  
 100 105 110  
 Gln Leu Ala Asp Glu Gly Thr Tyr Glu Val Glu Ile Ser Ile Thr Asp  
 115 120 125  
 Asp Thr Phe Thr Gly Glu Lys Thr Ile Asn Leu Thr Val Asp Val Pro  
 130 135 140  
 Ile Ser Arg Pro Gln Val Leu Gly Ala Ser Thr Thr Val Leu Glu Leu  
 145 150 155 160  
 Ser Glu Ala Phe Thr Leu Asn Cys Ser His Glu Asn Gly Thr Lys Pro  
 165 170 175  
 Ser Tyr Thr Trp Leu Lys Asp Gly Lys Pro Leu Leu Asn Asp Ser Arg  
 180 185 190  
 Met Leu Leu Ser Pro Asp Gln Lys Val Leu Thr Ile Thr Arg Val Leu  
 195 200 205  
 Met Glu Asp Asp Asp Leu Tyr Ser Cys Val Val Glu Asn Pro Ile Asn  
 210 215 220  
 Gln Gly Arg Thr Leu Pro Cys Lys Ile Thr Glu Tyr Arg Lys Ser Ser  
 225 230 235 240  
 Leu Ser Ser Ile Trp Leu Gln Glu Ala Phe Ser Ser Leu Gly Pro Trp  
 245 250 255